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Winter Bur Clover

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WINTER BUR CLOVER

BY

W. C. WELBORN

This plant is gradually taking the commons and roadsides at many places in Texas, growing on all grades of land from the poor sands to the stiff, black waxy lands.

The burr clover has two species growing in this country, the *Medicago denticulata* and *Medicago maculata*, or spotted leaf kind. The former, also called California clover, is most generally found in Texas. It is growing about almost all the towns from Houston to Dallas. The other kind the writer has seen at Palestine, Jacksonville and Nacogdoches.

RELATED TO ALFALFA.

As the name "Medicago" would indicate, bur clover is closely related to alfalfa instead of the true clovers. While alfalfa, being mostly a summer grower, requires choice land and almost ideal conditions, bur clover grows in winter and early spring, and will thrive on any kind of land with rainfall enough to bring up the seed in the fall, and without any particular effort in the way of preparation. Alfalfa will probably not grow profitably on the great majority of rather thin, sandy or clay uplands of East and South Texas. Bur clover is perfectly at home on these locations after once getting a start.

In Nutritive Value, this plant is probably equal to alfalfa; but since it completes its growth and dies by April or May, it is not generally considered of much value for hay. It would give only one crop of hay, and that not a heavy one. Therefore, it is generally grazed through winter and early spring. It is not relished especially by stock, and when they can get other grazing, they often pass it by, thus leaving the impression on people sometimes that stock do not eat it. As a matter of fact, they do eat it, and at a time when there is little else to eat, and it is very nutritious. Winter before last, a warm winter, the Mississippi A. & M. College kept, if I remember correctly, 100 head of cattle on a pasture of bur clover without giving them more than two weeks of feeding. The cattle were in good shape all winter, and did not require even the two weeks of feeding they received.

In this climate bur clover always gives good grazing from one to two months before Bermuda and other summer grasses are ready. It thus enables us to almost fatten cattle before flies, heat and other

annoying conditions appear. As grazing for dairy cows, it materially lightens feed bills, and in a large measure compensates for the lack of silage, one of the best and cheapest dairy feeds to be had.

For Hogs it affords good grazing from November to May, say full half the year, and the grazing is just as nutritious, according to chemical analysis, as alfalfa. Alfalfa probably does not afford grazing more than eight months in the year, and yet it is one of the greatest pork-producing crops known, when grazed in connection with light corn feeding. An acre of alfalfa has often produced pork enough to pay for the corn consumed, and from 500 to 750 pounds besides.

With plenty of winter and summer grazing, and a little corn feeding, hogs have often been produced for from 2 to 2½ cents a pound, while hogs raised and fattened on corn alone probably cost in the neighborhood of 10 cents a pound. It should not be forgotten, however, that no grazing crop alone will make hogs grow rapidly without some grain or other concentrated food in connection with it.

Bur Clover on Bermuda Grass is the finest kind of combination for an all-the-year-around pasture. The clover grows in winter, while the Bermuda is dormant, and in the early spring before the latter gets a start. The grass sod holds up the stock while the clover is being grazed. The clover dies root and top in time to begin to rot and fertilize the soil by the time the weather is warm enough to start the grass.

The nitrogen gathered from the air by the clover, and gradually given to the grass through the summer as the clover stems, roots and leaves rot, makes the grass larger, greener, tenderer and more nutritious.

SEED PRODUCTION.

Before the clover dies in spring, it makes a great quantity of burs, containing the seed, from 50 to 200 bushels per acre, and these are left on the ground to come up again in the fall, which they never fail to do when the fall rains come, and without any further preparation of the land whatever. If, for any reason, the land is plowed or harrowed or otherwise treated, it makes no difference—they come up anyhow. The writer has seen old bur clover land planted in cotton or other hoed crops, and yet the bur clover would continue to come up each fall for three years.

Sheep are said to be able to graze this plant close enough to prevent seeding, but the author never saw this done, and never saw any other stock eat it close enough to prevent an abundant seeding. So after being once well started, one has it always, unless he chooses to get rid of it.

As a Cover Crop to protect and fertilize and improve the soil, it is one of the very best crops we have. As indicated above, if land is once well stocked with bur clover seed, it may be cultivated three years, and a volunteer clover crop will come up every fall and clothe the land for the winter. Some few farmers are sowing bur clover on cotton land, and next spring leaving a balk between the cotton rows to mature clover seed on, and breaking this out after the clover dies and while working the cotton. At this station, we have fine crops of

sorghum, peas, kaffir corn and peanuts growing where the clover grew in winter and early spring. With these crops, sweet potatoes and others, bur clover may grow in winter and mature its seed in time to plant the summer crop.

Bur Clover for the Orchard is undoubtedly a much better crop than cowpeas, and probably the best crop we can get for this purpose. Some say cowpeas foster certain root-knot diseases of fruit trees. Cowpeas must make heavy drafts on the soil for moisture and food at a time when the trees may need these to make growth or mature fruit. Every plant while growing is, in a sense, a veritable pumping engine, as every pound of dry matter produced in a plant requires to have pumped up and passed off through its leaves perhaps 300 pounds of water, or a good sized barrel full. Peas are a land-improving crop, it is true, but they are too greedy to improve the land any while they are living and growing. When they die and begin to rot, they begin to improve the land, but this is usually after the trees have completed their work for the summer. Hence, the peavines afford their improvement the next year—that part of it not washed and leached out by the winter rains. Well cultivated cotton is probably a better crop for an orchard than peas.

Bur clover completes its growth in April, when there is still plenty of moisture for it and for the trees—sometimes too much, so it is an advantage to have some of it drawn out. If plowed under promptly, it begins to rot in time to feed the fruit trees while making their best growth, or doing their greatest work—making fruit. Then by keeping the land cultivated clean, it holds its moisture better than by any other treatment.

SOWING BUR CLOVER.

The larger Texas seed houses now keep the hulled bur clover seed for sale. These come from California, where the seed are gathered and cleaned in large quantity. If seed were abundant and cheap enough, we could follow nature and sow the seed in spring or summer on grass sod and wait for fall rains to bring them up.

Many people have bought seed in the bur and sowed, but since each bushel of burs contains no more than a pound or two of seed, stands were generally unsatisfactory. The cleaned seed should be sown on prepared land from September to December in this climate at the rate of 15 pounds per acre. If sod cannot be plowed, chopping both ways with a disc will probably make fresh soil enough to bury and hold the seed. If covered at all, light harrowing or brushing the seed in will answer.

INOCULATION.

It has been observed that bur clover does not do its best the first year on poor land without manuring. This is probably due in a measure to lack of inoculation with the bacteria necessary to enable it to get nitrogen from the air. Therefore, it is recommended to sow the seed at first on a good piece of land, or else scatter some manure over the land to be sown. It is found barnyard manure helps to inoculate alfalfa or bur clover. These two crops will inoculate each other.

LAND IMPROVEMENT AND PRESERVATION.

It has been frequently noted that land made from a certain kind of rock as far north as Wisconsin, when analyzed, shows several times as much soluble plant food as land of the same approximate formation in Mississippi. This difference is undoubtedly due to the open winters and abundant rainfall of the Southern States, causing leaching and waste of plant food. While the Northern soils are frozen and protected, we should be growing some crop to use and hold plant food in the South, to gather more plant food from the air, and to afford grazing for our stock.

Again, analysis show invariably that the organic matter of Southern soils wastes and disappears much more rapidly than in Northern soils. This is natural. In the South the land is frozen only a fraction of the time, and rotting of the remains of plant roots, stems and leaves goes on nearly all the time; hence our lands become old, worn, and rundown very rapidly.

If we grew more bur clover and other winter crops, and more peas and other summer crops to plow under, we could easily replace the natural wear and waste of humus from our soils, and make it profitable at the same time by means of the beef and milk and pork we could also produce from these crops.

A shortage of humus, or rotting vegetable matter, in soil will also generally mean a shortage of other soluble plant food. Plenty of humus helps to make soluble some of the vast stores of mineral plant food locked up in all soils. The very foundation of any good, fertile soil is a plentiful supply of humus. This should be supplied wherever possible by growing winter crops.